

Please add the following new claims:

--16. A method of operating an optical communication system, comprising:
increasing a spectrum width of a first optical channel space by at least an amount equal to a spectrum width of a second optical channel space to create a new optical channel space;

wherein the new optical channel space has a spectrum width at least equal to a sum of the spectrum width of the first optical channel space and the spectrum width of the second optical channel space; and

communicating a signal over the new optical channel space at a bit rate requiring the spectrum width of the new optical channel space.

17. The method of Claim 16, wherein increasing a spectrum width of a first optical channel space comprises tuning a filter associated with the first optical channel space to a wider passband.

18. The method of Claim 16, further comprising deactivating a transponder associated with the second optical channel space.

19. A fiber optic communication system, comprising:
a first optical channel space having a first spectrum width;
a second optical channel space adjacent to the first optical channel space, the second optical channel space having a second spectrum width;
a tunable filter operable to increase the second spectrum width of the second optical channel space by at least an amount equal to the first spectrum width to create a new optical channel space having a third spectrum width, the new optical channel space operable to carry a signal at a bit rate requiring the third spectrum width.

20. A method of operating an optical communication system, comprising:
dividing a first spectrum width of a first optical channel space to create a second optical channel space having a second spectrum width and a third optical channel space having a third spectrum width;
wherein a sum of the second spectrum width and the third spectrum width is equal to or less than the first spectrum width;
communicating a signal over the second optical channel space at a bit rate requiring a spectrum width equal to or less than the second spectrum width; and
communicating a signal over the third optical channel space at a bit rate requiring a spectrum width equal to or less than the third spectrum width.

21. The method of Claim 20, wherein dividing a first spectrum width of a first optical channel space comprises tuning a filter of the first optical channel space to a narrower passband.

22. A fiber optic communication system, comprising:
a first optical channel space having a first spectrum width;
a tunable filter operable to divide the first spectrum width of the first optical channel space to create a second optical channel space having a second spectrum width and a third optical channel space adjacent to the second optical channel space, the third optical channel space having a third spectrum width; and
wherein a sum of the second spectrum width and the third spectrum width is equal to or less than the first spectrum width.

23. A fiber optic communication system, comprising:

a plurality of emitters, each emitter operable to communicate a signal over a respective initial channel, wherein each initial channel has a respective initial spectrum width;

a plurality of modulators, each modulator coupled to at least one of the plurality of emitters, wherein each modulator is operable to modulate data onto a signal; and

a plurality of passband filters, each filter coupled to at least one of the plurality of emitters, wherein each filter is operable to vary the initial spectrum width of at least one of the initial channels to form at least one new channel that utilizes a channel spacing of at least one of the initial channels, wherein the at least one new channel has a respective new spectrum width. --